# National Environmental Methods Index

## NEMI Method Summary

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| **Method Number:** | 504.1 |
| **Method Name:** | **Descriptive Name:** EDB,DCBP, and 123TCP in Water Using GCECD<br>**Official Name:** 1,2-Dibromoethane (EDB), 1,2-Dibromo-3-Chloro-Propane (DCBP), and 1,2,3-Trichloropropane (123TCP) in Water by Microextraction and Gas Chromatography |
| **Revision:** | Revision 1.1, 1995 |
| **Media:** | WATER |
| **Subcategory:** | Organic |
| **Source Contact Info:** | U.S. EPA Office of Ground Water and Drinking Water<br>Technical Support Center<br>26 West Martin Luther King Drive<br>Cincinnati, OH 45268-1320 |
| **Citation:** | **Methods for the Determination of Organic Compounds in Drinking Water - Supplement III (EPA/600/R-95-131)**<br>**PDF method documentation** (80165 Byte file) |
| **Brief Method Summary:** | A 35-mL sample is extracted with 2-mL of hexane. The concentrations of analytes in the extract are measured using a gas chromatography (GC) system equipped with a linearized electron capture detector (ECD). |
| **Scope And Application:** | This method determines EDB, DCBP, and 123TCP (analytes) in finished drinking water and groundwater. |
| **Applicable Conc Range:** | 0.03 - 200 ug/L |
| **Interferences:** | (A) Solvent contamination: Use high purity solvents, and test solvents to prevent contamination.<br>(B) Extracted interferences: Interference can occur from extracted non-target compounds, with retention times similar to target compounds.<br>(C) DBCM Contamination: DBCM is a common disinfection byproduct which elutes near the EDB retention time window, and can obscure the EDB signal. |
| **QC Requirements:** | Initial demonstration of laboratory capability, followed by field reagent blanks (FRB), laboratory reagent blanks (LRB), laboratory fortified blanks (LFB), laboratory fortified sample matrix (LFM), and quality control samples (QCS). A MDL for each analyte must also be determined. |
| **Sample Handling:** | Samples are collected in 40 mL bottles and are dechlorinated using sodium thiosulfate. When sampling, the tap is allowed to run for 10 minutes, and collection is done at a flow rate of about 500 mL/min. Samples must be chilled at 4ºC upon collection and until analysis, and stored in an area that is free of organic solvent vapors. |

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| **Max Holding Time:** | 14 days; extracts up to 24 hours. |
| **Relative Cost:** | $201 to $400 |

## Method *EDB,DCBP, and 123TCP in Water Using GCECD (504.1)* has 3 analytes associated with it.

Click on a column header for definition.

| Analyte | Detection Level | Bias | Precision | Spiking Level |
|---|---|---|---|---|
| 1,2-Dibromoethane (106-93-4) | .01 ug/L | 117 % Rec (SL) | 8 RSD (SL) | .1 ug/L |
| DBCP (96-12-8) | .01 ug/L | 111 % Rec (SL) | 1 RSD (SL) | .1 ug/L |
| 1,2,3-Trichloropropane (96-18-4) | .02 ug/L | 111 % Rec (SL) | 4 RSD (SL) | .1 ug/L |

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